

REMARKS

Claims 1-3 and 5-8 currently appear in this application. The Office Action of December 19, 2007, has been carefully studied. These claims define novel and unobvious subject matter under Sections 102 and 103 of 35 U.S.C., and therefore should be allowed. Applicant respectfully requests favorable reconsideration, entry of the present amendment, and formal allowance of the claims.

Rejections under 35 U.S.C. 112

Claims 1, 4 and 5 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

This rejection is respectfully traversed. Claim 1 has been amended to delete the parentheses and to incorporate the limitations of claim 4 therein. That is, R₁-R₁₀ and R₁₂ are hydrogen, and R₁₁ is hydroxyl.

Art Rejections

Claims 1, 4 and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by Tona et al., *J. of Ethnophar.* 68 (1999) 193-203 as evidenced by Okunji et al., *Planta Med.* 68 (2002), 440-444. Tona is said to disclose the use of plant extracts from the *Garcinia kola* Heckel plant species for

treating malaria, and Okunji is said to demonstrate that the biflavones characterized as GB1, the compound of instant claim 5, and kolaflavanone are the main biologically active components of *Garcinia kola* seeds.

This rejection is respectfully traversed. Tona discloses the antimalarial activity of a crude extract using ethanol and/or methylene dichloride from nine African medical plants including *Garcinia kola*. That is, Tona only detected antimalarial activity of the extract from *Garcinia kola* and never describes the relationship between antimalarial activity and the compounds that actually provide this antimalarial activity.

The Examiner states at page 5, lines 5-9:

Though Tona et al. did not specifically disclose the biological active constituents present in its extracts, they did however suggest that antimalarial effect may be in its extract, they did however suggest that antimalarial effects may be attributed to the presence of biologically active components such as flavonoids, biflavonoids and xanones (see page 198, lines 40-44, right column and page 199, left column, lines 2-6).

It is respectfully submitted that Tona really describes the findings regarding *Garcinia* extract as follows:

Compounds such as phenolic acids, tannins and sterols are reported to be present in *Garcinia kola* stem bark. Other species belonging to this genus are known to contain in addition, flavonoids,

biflavonoids, xanthonenes, and benzophenones. During our study, a chromatographic analysis on TLC of the EtOH and CH₂Cl₂ extracts of the stem bark revealed the presence of xanthonenes. Therefore, it is plausible that the antiplasmodial activity displayed by EtOH and CH₂Cl₂ extracts of stem bark could be related to the presence of xanthonenes, because some of these compounds isolated from other *Garcinia* species had been shown to be potent inhibitors of *P. Falciparum* growth *in vitro*. (see page 198, right column, last 5 lines to page 199, left column, line 16)

It is clear from the above description that, although Tona suggests that xanthonenes might have an antimalarial effect since they are found to be present in crude EtOH and CH₂Cl₂ extracts of *Garcinia kola* stem bark by TLC. There is no suggestion whatsoever that biflavonoids have an antimalarial effect. In addition, it should be noted that the compositions claimed herein are extracted from *Garcinia kola* seed, while Tona et al. describe extracts from *Garcinia kola* bark.

Okunji discloses capillary electrophoresis determination of biflavones from *Garcinia kola* in three traditional African formulations, and four biflavones, GB1, GB2, GB-1 glycoside and kolaflavone are quantified. That is, Okunji only analyses biflavones from *Garcinia kola*, and there is no teaching or suggestion of the relationship between biflavones and antimalarial effect.

Okunji describes at page 440, left column, "introduction", lines 10-12, that a mixture of biflavonoids in G. kola has been shown to have hepatoprotective activity, bronchodilator effect, and antidiabetic activity. There is nothing in Okunji that would lead one skilled in the art to believe that the biflavonoids in G. kola have an antimalarial activity.

In view of the above, it is respectfully submitted that the claims are now in condition for allowance, and favorable action thereon is earnestly solicited.

Respectfully submitted,

BROWDY AND NEIMARK, P.L.L.C.
Attorneys for Applicant

By: /Anne M. Kornbau/
Anne M. Kornbau
Registration No. 25,884

AMK:srd
Telephone No.: (202) 628-5197
Facsimile No.: (202) 737-3528
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